## AMENDMENTS TO THE CLAIMS

1. (Original) A method for improving optical recognition of text in an electronic bitmap including non-white pixels and white pixels through preprocessing of the bitmap in a computer, the method comprising:

a) receiving the bitmap;

b) locating one or more bytes having no non-white pixels in the received bitmap, wherein the locating identifies gaps in character strokes;

c) inserting bytes having non-white pixels into a series of bytes having no non-white pixels; and

d) optically recognizing the bitmap for a predefined class of text characters.

2. (Original) The method of Claim 1, further comprising:

e) establishing a layout of the bitmap as a matrix of bytes, the matrix having columns and rows;

f) identifying a series of bytes along the column having no non-white pixels;

g) counting the number of bytes in the series of bytes;

h) determining whether the number exceeds a predefined maximum value; and

i) replacing each of the series of bytes with one of the bytes bounding the series of bytes when the predefined maximum value is not exceeded.

3. (Original) The method of Claim 2, further comprising repeating f) to i) for the entire column and for all the columns of the matrix.

4. (Original) The method of Claim 1, wherein locating one or more bytes having no non-white pixels includes reading a series of bytes in the bitmap.

5. (Original) A method for improving optical recognition of text in an electronic bitmap including white pixels and non-white pixels through preprocessing of the bitmap in a computer environment, the method comprising:

receiving the bitmap;

reading a series of bytes in the bitmap;

identifying in the read series at least one vertically adjacent byte containing all white pixels vertically bounded by bytes containing at least one black pixel;

counting the number of the at least one vertically adjacent byte containing all white pixels;

reading at least one of the bounding bytes and writing the read bounding byte to each of the at least one byte containing all white pixels when the number does not exceed a predefined maximum value; and

optically recognizing the bitmap for a predefined class of text characters.

6. (Original) The method of Claim 5, wherein the non-white pixels are black pixels in a black and white bitmap.

7. (Original) The method of Claim 5, further comprising reading each byte in vertical succession for each byte-length column of bytes in the bitmap until the vertical and horizontal boundaries of the bitmap have been reached.

8. (Original) The method of Claim 5, wherein the bitmap is optically recognized using optical character recognition (OCR).

9. (Original) The method of Claim 5, wherein the bitmap is optically recognized using intelligent character recognition (ICR).

10. (Original) A method for improving optical recognition of text in an electronic bitmap including white pixels and non-white pixels through preprocessing of the bitmap in a computing environment, the method comprising:

receiving the bitmap;

reading a series of bits in the bitmap;

identifying in the series of bits at least one vertically adjacent white pixel bounded vertically by non-white pixels;

counting the number of the at least one vertically adjacent white pixel;

writing a non-white pixel to each of the at least one vertically adjacent white pixel when the number does not exceed the predefined maximum value; and

optically recognizing the bitmap for a predefined class of text characters.

11. (Original) The method of Claim 10, further comprising reading each bit in vertical succession for each horizontal position of the bitmap until the vertical and horizontal boundaries of the bitmap have been reached.

12. (Original) A method for improving optical recognition of text in an electronic bitmap including white pixels and non-white pixels through preprocessing of the bitmap in a computer environment, the method comprising:

receiving the bitmap;

reading a subject bit in the bitmap;

reading a right bit and a left bit, the right bit and the left bit being horizontally adjacent to the subject bit;

grouping the right bit, left bit and the subject bit into a combination bit group;

identifying at least one vertically adjacent combination bit group having all white pixels vertically bounded by combination bit groups containing at least one non-white pixel;

counting the number of the at least one vertically adjacent combination bit group;

reading at least one of the combination bit groups containing at least one non-white pixel and writing the read combination bit group to each of the at least one

combination bit group containing all white pixels when the number does not exceed the predefined maximum value; and

optically recognizing the bitmap for a predefined class of text characters.

13. (Original) The method of Claim 12, further comprising reading in vertical succession each combination bit group in each three-bit length column of the bitmap until the vertical and horizontal boundaries of the bitmap have been reached.

14. (Original) The method of Claim 13, wherein the three-bit length column includes a present column and a previous column, and wherein the reading of the combination bit group in vertical succession in the present column includes reading of the previous column's subject bit and right bit and wherein the subject bit in the previous column is the left bit in the present column and the right bit in the previous column is the subject bit in the present column.

15. (Original) A system to improve optical recognition of text in an electronic bitmap including non-white pixels and white pixels, the system comprising:

a computer environment; and

a software program operating in the computer environment, comprising:

a receive module configured to receive the bitmap,

an enhancement module configured to enhance the bitmap obtained from the receive module, wherein the enhancement module performs a contiguity analysis and selective insertion of pixels based on the contiguity analysis, wherein the contiguity analysis identifies gaps in character strokes, and

a recognition module configured to recognize the text in the enhanced bitmap.

16. (Original) The system of Claim 15, wherein the enhancement module performs one of a byte length process, a bitwise process or a multi-bit process.

17. (Original) The system of Claim 15, wherein the computer environment is connected to an optical scanner.

18. (Original) The system of Claim 15, wherein the computer environment is connected to a network and receives the bitmap via the network.

19. (Original) A method of improving optical recognition of text in an electronic bitmap including non-white pixels and white pixels through preprocessing of the bitmap in a computing environment, the method comprising:

a) receiving the bitmap;

b) performing a contiguity analysis of the bitmap, wherein the contiguity analysis identifies gaps in character strokes;

c) performing selective placement of non-white pixels into the bitmap so as to increase contiguity; and

d) optically recognizing the bitmap for a predefined class of text characters.

20. (Original) The method of Claim 19, wherein b) and c) are performed by one of a byte length process, a bitwise process, or a multi-bit process.

21. (Original) The method of Claim 19, wherein the contiguity analysis identifies a vertical gap in image data between two image objects, each image object being located at the same horizontal position on the bitmap as the gap.

22. (Original) The method of Claim 21, wherein the gap is measured to determine if the vertical distance of the gap is within a predetermined maximum value.

23. (Original) The method of Claim 22, wherein a vertically positioned gap not exceeding the predetermined maximum value is determined to be a break in a character stroke.

24. (Original) The method of Claim 19, wherein the bitmap, arranged as columns and rows, is processed along each column in succession.

25. (Original) A computer-readable medium containing instructions for controlling a computer environment to improve optical recognition of text in an electronic bitmap including non-white pixels and white pixels, by:

receiving the bitmap;

performing a contiguity analysis of the bitmap, wherein the contiguity analysis identifies gaps in character strokes;

performing selective placement of non-white pixels into the bitmap so as to increase contiguity; and

optically recognizing the bitmap for a predefined class of text characters.

26. (Original) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method of improving optical recognition of text in an electronic bitmap including non-white pixels and white pixels, the method comprising:

receiving the bitmap;

performing a contiguity analysis of the bitmap, wherein the contiguity analysis identifies gaps in character strokes;

performing selective placement of non-white pixels into the bitmap so as to increase contiguity; and

optically recognizing the bitmap for a predefined class of text characters.

27. (Original) A system to improve optical recognition of text in an electronic bitmap including non-white pixels and white pixels, the system comprising:

a) computing means for executing computer software;

b) means for receiving the bitmap at the computing means;

c) means for performing a contiguity analysis of the bitmap and means for performing selective placement of non-white pixels into the bitmap so as to increase contiguity, wherein the contiguity analysis identifies gaps in character strokes; and

d) means for optically recognizing the bitmap for a predefined class of text characters.

28. (Original) The method of Claim 27, wherein c) comprises one of a byte length means, a bitwise means, or a multi-bit means.

29. (New) The method of Claim 1, wherein each byte comprises eight bits and wherein each bit is displayed as a unique pixel.

30. (New) The method of Claim 1, wherein inserting bytes having non-white pixels into a series of bytes having no non-white pixels comprises eliminating at least a portion of the identified gaps in character strokes.

31. (New) The method of Claim 1, wherein the received bitmap comprises a plurality of bytes and wherein the locating of bytes having no non-white pixels comprises comparing vertically adjacent ones of the bytes of the bitmap.

32. (New) The method of Claim 1, wherein the gaps in character strokes are vertical gaps.

33. (New) The system of Claim 15, wherein the pixels that are selectively inserted are non-white pixels.

34. (New) The system of Claim 15, wherein the gaps in character strokes are vertical gaps.

35. (New) A method for improving optical recognition of text in an electronic bitmap including non-white pixels and white pixels through preprocessing of the bitmap in a computer, the method comprising:

a) receiving the bitmap;

b) locating one or more bytes having no non-white pixels in the received bitmap, wherein the locating identifies gaps in character strokes, and wherein the locating includes reading a series of bytes in the bitmap;

c) inserting bytes having non-white pixels into a series of bytes having no non-white pixels; and

d) optically recognizing the bitmap for a predefined class of text characters.

36. (New) A method of improving optical recognition of text in an electronic bitmap including non-white pixels and white pixels through preprocessing of the bitmap in a computing environment, the method comprising:

a) receiving the bitmap;

b) performing a contiguity analysis of the bitmap, wherein the contiguity analysis identifies gaps in character strokes, and wherein the contiguity analysis identifies a vertical gap in image data between two image objects, each image object being located at the same horizontal position on the bitmap as the gap, wherein the gap is measured to determine if the vertical distance of the gap is within a predetermined maximum value;

c) performing selective placement of non-white pixels into the bitmap so as to increase contiguity; and

d) optically recognizing the bitmap for a predefined class of text characters.